

**OW Management Report**  
**Gold King Mine and Typhoon Soudelor**  
**August 10, 2015**

**Gold King Mine**

**Background:**

On August 5, 2015, an EPA team working to investigate and address contamination at the Gold King Mine in San Juan County, Colorado, unexpectedly triggered a large release of mine waste water into the upper portions of Cement Creek. Initial estimates are that the release contained approximately one million gallons of water that was held behind unconsolidated debris near an abandoned mine portal.

The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah. The City of Durango relies on the Animas River as one of its water sources - the Animas source is off-line, and they are continuing to provide clean drinking water to the City. The river is also used for recreational purposes, including fishing and rafting. At the confluence of the Animas River and the San Juan River in New Mexico, there is a designated critical habitat for the Colorado Pike Minnow fish and the Razorback Sucker fish.

The first two days after the incident, the plume was moving at approximately 4 miles per hour. According to the EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) flyover, as of 4:00 pm on August 8, the plume had roughly reached Kirtland, New Mexico. The plume has been visually diluted and the leading edge of it is far less defined. The water is reported to be muddy with an orange tinge rather than solid orange.

**Public Statement (from 8/8/15):**

"EPA is committed to working closely with response agencies and state and local officials to ensure the safety of citizens, respond to concerns and to evaluate impact to water contaminated by the spill. EPA teams are deployed throughout the Animas River corridor collecting data.

EPA Region 8 is also in close coordination with Region 6 and Region 9 and the states of Colorado, New Mexico, Utah, Southern Ute Tribe and Navajo Nation.

EPA is sharing information as quickly as possible with the public as experts work to evaluate any effects the spill may have on drinking water, public health, agriculture, fish and wildlife. Regular updates on the response for the public and the media are scheduled throughout the weekend. The latest updates and information on the response are available at: <http://www2.epa.gov/region8/gold-king-mine-release-emergency-response>."

**Response Coordination:**

Colorado Parks and Wildlife (CPW) officials have been monitoring the effects of the spill on terrestrial

and aquatic wildlife since the incident began. CPW is watching for any impacts on wildlife, whether they are acute or chronic. Fish are especially sensitive to changes in water quality. CPW is also monitoring a control station on a clean tributary.

Unified Command is being established in Durango, Colorado.

The EPA HQ EOC, including the Water Desk, will partially activate on Tuesday August 11. Shifts will be 8 AM – 5 PM, Monday to Friday. No evening or weekend shifts are anticipated. Kevin Tingley will tentatively staff the Water Desk through Friday August 14.

An HQ Environmental Unit is to be established to interpret sampling data. A HQ Public Information Officer is also to be identified for developing messages for the public. This will also involve posting of sampling results to the EPA Web site.

### **EPA Activities:**

Water quality sampling by EPA Region 8 staff continues to occur, and START is taking more samples today. EPA Region 8's lab in Golden, Colorado, (ESAT) and a local lab in Durango, are being used to analyze the samples. Region 8 is determining if additional lab capacity is needed. Meetings were held with San Juan County, Colorado, officials, and La Plata County, Colorado, officials yesterday. ATSDR consulted San Juan County, Colorado, with them on personal safety issues for people potentially affected by the contaminated water.

The EPA Region 8 Regional Administrator and Removal Manager met with LaPlata County and City of Durango officials on August 7, 2015, and held a public meeting.

EPA Region 8 staff met with the Durango City Engineer to analyze and implement measures to protect the Durango drinking water supply.

EPA Region 8 is coordinating on the incident with EPA Regions 6 and 9, the States of Colorado and New Mexico, and the Navajo Nation and Southern Ute Tribes.

### **Infrastructure Impacts:**

**Utah** – all systems are operational.

**Navajo** - Aneth, Montezuma Creek, and Halchita have shut down their water supplies. San Juan County is providing emergency supplies of drinking water, and residents also can get water hauled in from Bluff, UT for their livestock. Aneth and Montezuma Creek are in need of added water haulers, though, to provide a continuous supply. Region 9 ERT will be working to assist them today. Halchita is getting water from another source and Navajo EPA said they are fine for now.

**New Mexico** – Aztec and Farmington still have their intakes shut down, along with several other communities that Region 6 is verifying.

**Aztec** - Region 6 DW staff onsite confirmed that Aztec has over 20 days of storage in 3 water reservoirs. They also have a connection to the Bloomfield system that can be used for livestock watering. Bloomfield's intake is on the San Juan river before the confluence with the Animas.

**Farmington, NM** has 45 days onsite raw water supply and are currently managing.

**Colorado** – Durango and Glacier Club still have their intakes shut down but are getting by with other sources or storage.

**Durango** – has a second intake on the Florida River, which was not impacted by the spill. With conservation the community has been able to achieve over the weekend, including not doing any outdoor watering, the City has been able to keep up with demand.

**Glacier Club** - Upon original notification call, they closed their SWTP intakes and the headgate for irrigation water to the golf course. There was no impact to the SWTP. They still have the intake and headgate closed. They have substantial finished water storage that they are using to keep the distribution system pressurized.

**Animas Water Company (Hermosa, CO)** - They are a groundwater system that also has an open pending GWUDI evaluation underway to determine if the wells are under the influence of surface water in the Animas River. They have not seen an impact to the quality of their well water, and understand that there may be a delay in impact depending on the nature of the aquifer and time of travel to the wells. They are closely monitoring their water quality and will report any changes.

**Private Wells** – both Regions 8 and 6 have offered to test private wells to determine if they are impacted.

#### **Sampling Results:**

EPA is releasing a detailed data table of the sampling in Cement Creek and the upper portions of the Animas River from August 5, the date of the incident, and August 6.

EPA expects to have new data from August 7 which is currently undergoing review and will be available to the public later today. The data table contains a list of analyzed constituents, largely metals, and their numeric value in micrograms per liter, which is equal to parts per billion, or ppb.

The incident caused an increase in concentrations of total and dissolved metals as the contaminated mine water moved downstream. These concentrations began to trend toward pre-event conditions by August 6. August 7 and 8 data, when it is available, will inform whether the trend towards pre-event conditions continues.

Note: Total metals analysis for water samples includes the metals content both dissolved in the water and present in the particulates in the water. Typically a dissolved metals analysis of a water sample is performed by removing the particulates with a filter, then analyzing the filtered water for metals.

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#### **Typhoon Soudelor:**

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